

SOP 11 - Hoods

- A. Protection Afforded by Hoods
 - 1. Hood ventilation prevents toxic, offensive, flammable, or hazardous vapors from entering the laboratory atmosphere.
 - 2. Hood sash protects personnel from splashes or minor explosions and fires which occur inside the hood.
 - 3. Hood offers preliminary containment of spills which occur therein.
- B. General Hood Procedures
 - 1. Keep the sash down when not performing operations in the hood.
 - 2. Keep the exhaust fan on when potentially harmful materials or experiments are in the hood.
 - 3. Processes or equipment located in the rear of the hood will achieve better ventilation than those located in the front of the hood.
 - 4. Do not use hoods as storage for chemicals.
 - 5. As a rule of thumb, hoods, or other local ventilation devices, should be used when the experiment or process involves a volatile chemical with a threshold limit value of less than 50 parts per million.
- C. Maintaining Proper Air Flow
 - 1. The fume hoods at SNARC and DB NRRC operate on two different principles:
 - a. SNARC: The fume hoods achieve a design face velocity of 100 feet per minute with their sashes fully open.
 - b. DB NRRC: The fume hoods have an energy conservation feature and only achieve a design face velocity of 100 feet per minute with their sashes approximately half open. The proper sash height is indicated by a sticker on the hood. For operations with toxic or dangerous materials, the scientist or technician should contact Cletus Patterson to increase the airflow in the fume hood.
 - 2. Processes or equipment should not be located close to exhaust vents, the sides, or the front of the hood.
 - 3. Processes or equipment should be placed on stands so that at least one inch of air space is between them and the counter top of the hood.
 - 4. Materials placed or stored in front of a hood sash will adversely affect airflow into the hood.
 - 5. Solid objects (e.g., paper) should not be allowed to enter the exhaust ducts of hoods.
- D. Hood Inspection
 - 1. Hoods must be inspected at least annually for proper airflow patterns and volume.
 - 2. Hoods should be inspected in accordance with the procedures found in ARS Manual 230.
 - 3. After passing inspection, a sticker should be affixed to the hood identifying that:
 - a. The hood has passed inspection.
 - b. The date of the inspection.
 - c. The initials or name of the inspector.